



[4910-13-P]

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-0885; Directorate Identifier 2012-NE-18-AD]**

**RIN 2120-AA64**

**Airworthiness Directives;** Thielert Aircraft Engines GmbH Models TAE 125-02-99 and TAE 125-02-114 Reciprocating Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all TAE 125-02-99 and TAE 125-02-114 reciprocating engines. This proposed AD was prompted by an in-flight shutdown of an airplane equipped with a TAE 125-02-99 engine. This proposed AD would require inspection of the oil filler plug vent hole at the next scheduled maintenance or within 110 flight hours after the effective date of this AD. If chips are found to be blocking the vent hole, additional corrective action is required before next flight. We are proposing this AD to prevent engine in-flight shutdown or power loss, possibly resulting in reduced control of the airplane.

**DATES:** We must receive comments on this proposed AD by [insert date 60 days after date of publication in the FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal Rulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: 202-493-2251.

For service information identified in this proposed AD, contact Thielert Aircraft Engines GmbH, Platanenstrasse 14 D-09350, Lichtenstein, Germany, telephone: +49-37204-696-0; fax: +49-37204-696-2912; e-mail: [info@centurion-engines.com](mailto:info@centurion-engines.com). You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received and other information. The street address for the Docket Operations office (phone: 800-647-5527) is the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England

Executive Park, Burlington, MA 01803; e-mail: frederick.zink@faa.gov; telephone: 781-238-7779; fax: 781-238-7199.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0885; Directorate Identifier 2012-NE-18-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

### **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness

Directive No. 2012-0112, dated June 22, 2012 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

An engine in-flight shutdown has been reported on an aeroplane equipped with a TAE 125-02-99 engine. The results of the investigation showed that this was due to blockage of the gearbox oil filling plug vent hole, which caused pressurisation in the gearbox, resulting in oil leakage and a slipping clutch. This condition, if not corrected, could result in further cases of engine in-flight shutdown and consequent loss of control of the aeroplane.

Further investigation revealed that the blockage to the oil cap vent was the result of a residual chip from machining the oil cap vent hole. The chip is from the manufacturing process and did not fall off the oil plug. This is not the result of material in the oil system causing the blockage. You may obtain further information including the affected gearbox serial number list by examining the MCAI in the AD docket.

#### **Relevant Service Information**

Thielert Aircraft Engines has issued Service Bulletin TM TAE 125-1015 P1, Initial Issue, dated April 27, 2012. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

#### **FAA’s Determination and Requirements of This Proposed AD**

This product has been approved by Germany and is approved for operation in the United States. Pursuant to our bilateral agreement with Germany, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. The proposed AD would require inspection of the oil filler plug vent hole at the next scheduled maintenance or within 110 flight hours after the effective

date of this AD. If chips are found to be blocking the vent hole, additional corrective action is required before next flight.

### **Costs of Compliance**

We estimate that this proposed AD would affect about 45 engines installed on airplanes of U.S. registry. We also estimate that it would take about 2.5 work-hours per product to comply with this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$30 per engine. Based on these figures, we estimate the cost of the proposed AD to U.S. operators to be \$10,913.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct

effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

**Thielert Aircraft Engines:** Docket No. FAA-2012-0885; Directorate Identifier 2012-NE-18-AD.

**(a) Comments Due Date**

We must receive comments by [insert date 60 days after date of publication in the FEDERAL REGISTER].

**(b) Affected Airworthiness Directives (ADs)**

None.

**(c) Applicability**

This AD applies to all TAE 125-09-99 and TAE 125-02-114 reciprocating engines.

**(d) Reason**

This AD was prompted by an in-flight shutdown of an airplane equipped with an TAE 125-02-99 engine. We are issuing this AD to prevent engine in-flight shutdown or power loss, possibly resulting in reduced control of the airplane.

**(e) Actions and Compliance**

Unless already done, within 110 flight hours after the effective date of this AD, or at the next scheduled maintenance, do the following.

(1) Remove the oil filler plug and check for chips blocking the vent hole in accordance with TAE Service Bulletin (S/B) TM TAE 125-1015 P1, Initial Issue, dated April 27, 2012.

(2) If chips are found during the inspection in paragraph (e)(1) of this AD, disassemble the gearbox and check the radial shaft sealing rings (at the clutch and the propeller shaft) for leakage. If leakage is noted, replace the gearbox before the next flight.

**(f) Installation Prohibition**

After the effective date of this AD, do not install a gearbox with a S/N listed in TAE S/B TM TAE 125-1015, Initial Issued, dated April 27, 2012, into any engine unless the oil filler plug has passed the inspection required by paragraph (e)(1) of this AD.

**(g) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19.

**(h) Related Information**

(1) For more information about this AD, contact Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: [frederick.zink@faa.gov](mailto:frederick.zink@faa.gov); telephone (781) 238-7779; fax (781) 238-7199.

(2) Refer to MCAI Airworthiness Directive No. 2012-0112, dated June 22, 2012, and TAE S/B TM TAE 125-1015 P1, Initial Issue, dated April 27, 2012 for related information.

(3) For service information identified in this AD, contact Thielert Aircraft Engines GmbH, Platanenstrasse 14 D-09350, Lichtenstein, Germany, telephone: +49-37204-696-0; fax: +49-37204-696-2912; e-mail: [info@centurion-engines.com](mailto:info@centurion-engines.com). You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.



Issued in Burlington, Massachusetts, on August 24, 2012.

Robert G. Mann,  
Acting Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.

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